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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,614	04/02/2004	Paul Lapstun	HYG016US	9403
24011 7590 02/14/2008 SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			EXAMINER ZHANG, FAN	
			ART UNIT 4157	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/815,614	<b>Applicant(s)</b> LAPSTUN ET AL.	
	<b>Examiner</b> FAN ZHANG	<b>Art Unit</b> 4157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Apr 2, 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/01/2004, 02/12/2007</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objection***

1. Claim 48 (A system according to claim 47, the printer being a printer according to claim 27.) objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims 47 and 27. See MPEP § 608.01(n). Accordingly, the claim 48 is also further rejected on the merits.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 6, 10, 12, 13, 15, 16, 19, 23, 24, 27, 28, 30, 31, 33, 35-37, 40, 44, 45, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubow et al (Pub No.: US 2006/0118631).**

**Regarding claim 6,** Lubow et al teach: A method of indicating an identity of a product item, the method including: (e) determining indicating data indicative of an identity of the product item; (f) determining, using the indicating data, at least one coded data portion indicative of the identity of the product item; and, (g) determining, using the indicating data, at least one barcode indicative of the identity of the product item; and, (h) printing, on an interface surface associated with the product item: (i) a plurality of

coded data portions on the interface surface, each coded data portion being indicative of the product identity data such that the product identity data can be determined by sensing any one of the coded data portions with a sensing device; and, (ii) the barcode [0017, 0087: lines 1-13; 0042: lines 7-14; 0092]. Although Lubow et al do not elaborate on printing a plurality of same code data portions on the interface surface, Lubow et al certainly suggest the idea in [0042, lines 9-14]. Therefore, given Lubow et al's prescription, it would have been obvious choice to an ordinary skilled in the art to exemplify Lubow et al's idea in an embodiment of having multiple bar code symbols printed on a product to increase signal sensibility from various positions/angles for product information identification.

**Regarding claim 10**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al further teach: The method of claim 6 or claim 8, wherein the method includes: (a) receiving the indicating data; (b) generating, using the indicating data, product identity data indicative of the product identity; and, (c) determining, using the product identity data, the at least one coded data portion [0087].

**Regarding claim 12**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al further teach: The method of any one of claims 1, 6 and 8, wherein the interface surface further includes visible markings relating to the respective product item [0010, lines 1-9], and wherein the method includes printing the coded data portions at least one of: (a) before printing the visible markings; (b)

substantially simultaneously with printing the visible markings; and, (c) after printing the visible markings [0037; 0039; 0041: lines 1-7].

**Regarding claim 13**, the rationale applied to the rejection of claim 12 has been incorporated herein. Lubow et al further teach: The method of claim 12, wherein the method includes printing the visible markings with a first printer and printing the coded data portions with a second printer [0038, 0039, and 0086].

**Regarding claim 15**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al further teach: The method of any one of claims 1, 6 and 8, wherein the method includes providing the coded data portions at respective positions, and wherein each coded data portion is further indicative of the respective position [fig. 3(f), 0086].

**Regarding claim 16**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al further teach: The method of any one of claims 1, 6 and 8, wherein the interface surface is in the form of an adhesive label attachable to a product item [0037, lines 1-6].

**Regarding claim 19**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al further teach: The method of any one of claims 1, 6

and 8, wherein the coded data is redundantly encoded [0042, lines 9-14].

**Regarding claim 23**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al further teach: The method of any one of claims 1, 6 and 8, wherein the coded data is provided on the interface surface coincident with visible markings representing at least one of: (a) product information; (b) the identity of the product item; and (c) an interaction request [0038].

**Regarding claim 24**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al further teach: The method of any one of claims 1, 6 and 8, wherein the interface surface is at least a portion of at least one of: (a) product item packaging; (b) product item labelling; (c) product manuals; (d) product instructions; and, (e) a surface of the product item [0036, 0037, and 0038].

**Claim 27** has been analyzed and rejected w/r to claim 6 in accordance with Lubow et al's further teaching on: a printer for printing an interface surface associated with a product item [fig. 2, unit 145].

**Claim 28** has been analyzed and rejected w/r to claim 10 in accordance with the rejection of claim 27 and Lubow et al's further teaching on: a computer system communicates with the printer [fig. 2, unit 120].

**Claim 30** has been analyzed and rejected w/r to claim 12 in accordance with the rejection of claim 27.

**Claim 31** has been analyzed and rejected w/r to claim 13 in accordance with the rejection of claim 30.

**Regarding claim 33**, the rationale applied to the rejection of claim 27 has been incorporated herein. Lubow et al further teach: The printer of claim 27, wherein at least one of the product item and the interface surface is associated with a barcode, the printer being adapted to sense the barcode to determine the product identity data [0038].

**Claim 35** has been analyzed and rejected w/r to claim 6 in accordance with the rejection of claim 27.

**Claims 36 and 37** have been analyzed and rejected w/r to claims 15 and 16 respectively; and in accordance with the rejection of claim 27.

**Claim 40** has been analyzed and rejected w/r to claim 19 in accordance with the rejection of claim 27.

**Claims 44 and 45** have been analyzed and rejected w/r to claims 23 and 24 respectively; and in accordance with the rejection of claim 27.

**Claims 47 and 48** have been analyzed and rejected w/r to claim 28.

**4. Claims 1, 2, 3, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkham (Pub No.: US 2002/0067267).**

**Regarding claim 1**, Kirkham teaches: A method of printing an interface surface associated with a product item [fig.1: unit 116], the method including in a computer system [fig. 9: unit 916]: (a) determining product identity data indicative of an identity of the product item; and [0006], (b) controlling a printer to thereby print a plurality of coded data portions on the interface surface, each coded data portion being indicative of the product identity data such the product identity data can be determined by sensing any one of the coded data portions with a sensing device [0039: lines 1-14; 0028; 0043: lines 1-7]. Although Kirkham does not explicitly indicate printing a plurality of coded data portions in [0039], Kirkham certainly teaches printing a plurality of RFID antennas that are coupled to the same data portion and the data can be determined by sensing any of the coupled antennas. In addition, Kirkham does point out the possibility of utilizing multiple RFID tags with multiple data portions in [0043]. Therefore, given Kirkham's suggestion, it would have been an obvious variation to an ordinary skilled in the art to either couple multiple antennas associated with data portion of one tag or implement multiple tags with a plurality of data portions to provide non-planar antennas



for increasing the tags' sensibility when printed on shipping packages.

**Regarding claim 2**, the rationale applied to the rejection of claim 1 has been incorporated herein. Kirkham further teaches: The method of claim 1, wherein the method includes in the computer system: (c) receiving indicating data at least partially indicative of the identity of the product item; and, (d) generating, using the indicating data, the product identity data [0025: lines 7-12, 0056].

**Regarding claim 3**, the rationale applied to the rejection of claim 1 has been incorporated herein. Kirkham further teaches: The method of claim 1, wherein at least one of the product item and the interface surface is associated with an RFID tag, the method including reading the RFID tag to determine the product identity data [0056].

**Regarding claim 17**, the rationale applied to claim 1 has been incorporated herein. Kirkham further teaches: The method of any one of claims 1, 6 and 8, wherein the coded data is indicative of an EPC associated with the product item [0042; 0043: lines 1-7].

**Regarding claim 18**, the rationale applied to claim 1 has been incorporated herein. Kirkham further teaches: The method of any one of claims 1, 6 and 8, wherein the coded data distinguishes the product item from every other product item [0043, lines 1-5].

**5. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkham (Pub No.: US 2002/0067267) as applied to claim 1, and further in view of Zhou et al (Patent No.: US 6,201,901).**

**Regarding claims 4 and 5**, the rationale applied to the rejection of claim 1 has been incorporated herein. Kirkham teaches reading/writing a RFID tag for product identification. Kirkham also mentions barcode sensing in [0029] although does not discuss it in depth. In the same field of endeavor, Zhou et al teach: The method of claim 1, wherein at least one of the product item and the interface surface is associated with a barcode, the method including sensing the barcode to determine the product identity data; and wherein the method includes encoding the product identity data by printing the barcode on the interface surface or the product item [col 1, lines: 7-11]. Sensing, decoding, encoding, and printing a barcode and its related data has been well known and practiced in the art as prescribed by Zhou et al. Therefore, it would have been obvious to an ordinary skilled in the art to modify Kirkham's teaching to substitute a barcode for a RFID tag for product identification purpose.

**6. Claims 7-9 and 32, 34, 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubow et al (Pub No.: US 2006/0118631) as applied to claims 6 and 27 respectively, and further in view of Kirkham (Pub No.: US 2002/0067267).**

**Regarding claim 7**, the rationale applied to claim 6 has been incorporated herein. Lubow et al do not teach an RFID tag. Kirkham further teaches: The method of

claim 6, wherein at least one of the product item and the interface surface is associated with an RFID tag, the method including reading the RFID tag to determine the indicating data [0025]. The advantage of using RFID over barcode for identification purpose such as tracking shipment has been prescribed by Kirkham in [0031]. Therefore, it would have been an obvious variation to an ordinary skilled in the art to substitute RFID tag for bar code for tracking and identifying purpose at a better speed in a harsh environment.

**Claim 8** has been analyzed and rejected w/r to claim 6 except for (e) encoding the product identity data in an RFID tag. Lubow et al do not teach an RFID tag. Kirkham further teaches encoding the product identity data in an RFID tag in [0056: lines 6-11]. See the rationale for obviousness applied to the rejection of claim 6.

**Regarding claim 9**, the rationale applied to the rejection of claim 8 has been incorporated herein. The claim has been analyzed and rejected w/r to claim 6.

**Claim 32** has been analyzed and rejected w/r to claim 7 in accordance with the rejection of claim 27.

**Claim 34** has been analyzed and rejected w/r to claim 8 in accordance with the rejection of claim 27.

**Regarding claims 38 and 39**, the rationale applied to the rejection of claim 27 has been incorporated herein. Lubow et al do not teach EPC (Electronic Product Code), which is “a family of coding schemes created as a successor to the bar code and was created as a method of tracking goods using RFID technology” [Wikipedia]. However, Kirkham teaches: The printer of claim 27, wherein the coded data is indicative of an EPC associated with the product item and wherein the coded data distinguishes the product item from every other product item [0043, lines 1-5]. Therefore, it would have been an obvious variation to an ordinary skilled in the art to substitute RFID with EPC for bar code to identify each item manufactured as opposed to just the manufacturer and class of products as bar codes do.

**7. Claims 11, 21-22 and 29, 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubow et al (Pub No.: US 2006/0118631) as applied to claims 6 and 27 respectively, and further in view of Saito (Pub No.: US 2003/0201325).**

**Regarding claims 11, 21 and 22**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al do not teach infrared ink. In the same field of endeavor, Saito teaches: The method of any one of claims 1, 6 and 8, wherein the method includes printing the coded data portions in infrared ink; and wherein the coded data is substantially invisible to the unaided eye; and wherein the coded data is printed using infrared ink [0069]. Therefore, it would have been obvious to an ordinary skilled in the art to modify Lubow et al’s teaching to use infrared ink for security purpose.

**Claim 29** has been analyzed and rejected w/r to claim 11 in accordance with the rejection of claim 27.

**Claims 42 and 43** have been analyzed and rejected w/r to claims 21 and 22 respectively, and in accordance with the rejection of claim 27.

**8. Claims 14 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkham (Pub No.: US 2002/0067267) as applied to claim 1 and further in view of Moylan et al (Patent No.: US 7,180,627).**

**Regarding claim 14**, the rationale applied to the rejection of claim 1 has been incorporated herein. Although Kirkham does not elaborate on product identification process specifically, its methods of encoding and decoding RFID tags would have implied the following steps. Nonetheless, Moylan et al certainly exemplify the following method in a given embodiment: The method of any one of claims 1, 6 and 8, wherein the method includes, in the computer system: (a) determining an identifier indicative of a nature of the product item; (b) generating a serial number; and, (c) forming the product identity data from the identifier and the serial number [col 4, lines 19-52]. Therefore, it would have been obvious to an ordinary skilled in the art to combine Kirkham and Moylan et al's teaching for implementing the claimed method for product information identification or price verification based on customer request or for inventory control.

**Regarding claim 26**, the rationale applied to the rejection of claim 1 has been incorporated herein. Kirkham does not elaborate on data associated with interaction request. In the same field of endeavor, Moylan et al teach: The method of any one of claims 1, 6 and 8, wherein at least some of the coded data portions are indicative of at least one interaction request [col 5, lines 9-33].

**9. Claims 20 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubow et al (Pub No.: US 2006/0118631) as applied to claims 6 and 27 respectively, and further in view of Endoh (Patent No.: 5,818,031).**

**Regarding claim 20**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al teach redundant barcodes in [0042, lines 9-14]. However, Lubow et al do not teach encoding a bar code using Reed-Solomon code. In the same field of endeavor, Endoh teaches: The method of claim 6, wherein the coded data is encoded using Reed-Solomon encoding [col 2, lines 56-64]. Therefore, it would have been obvious to an ordinary skilled in the art to combine Lubow et al and Endoh's teaching to encode bar codes with Reed-Solomon code for improving the probability of reading the bar codes printed on mails as prescribed by Endoh.

**Claim 41** has been analyzed and rejected w/r to claim 20 in accordance with the rejection of claim 27.

**10. Claims 25 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable**

**over Lubow et al (Pub No.: US 2006/0118631) as applied to claims 6 and 27 respectively, and further in view of Ramcke et al (Patent No.: 5,834,530).**

**Regarding claim 25**, the rationale applied to the rejection of claim 6 has been incorporated herein. Lubow et al do not explicitly teach the area that the coded data covers. In the same field of endeavor, Ramcke et al teach: The method of any one of claims 1, 6 and 8, wherein the coded data is disposed over at least one of: (a) substantially all of any one of: i. an entire product surface; ii. packaging; and, iii. a product label; (b) more than 25% of any one of: i. an entire product surface; ii. packaging; and, iii. a product label; (c) more than 50% of any one of: i. an entire product surface; ii. packaging; and, iii. a product label; (d) more than 75% of any one of: i. an entire product surface; ii. packaging; and, iii. a product label [fig. 1: unit 2]. Therefore, given Ramcke et al's example, it would have been obvious to an ordinary skilled in the art to print a bar code on the entire label surface for better and easier recognition and scanning.

**Claim 46** has been analyzed and rejected w/r to claim 25 and in accordance with the rejection of claim 27.

### ***Contact***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fan Zhang whose telephone number is (571) 270-3751. The examiner can normally be reached on Mon-Fri from 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Vu Le can be reached on (571) 272-7332. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fan Zhang/

Patent Examiner

Patent Training Academy (PTA)

/ABUL K. AZAD/  
Primary Examiner, Art Unit 2626